

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated June 17, 2004. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1-19 are under consideration in this application. Claims 1, 3, 6-8, and 13 are being amended, as set forth above and in the attached marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim Applicants' invention. New claims 16-19 are being added to recite other embodiments described in the specification.

Additional Amendments

The claims are being amended or added to correct formal errors and/or to better disclose or describe the features of the present invention as claimed. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Allowed Subject Matter

Claims 3, 8-9 and 13 would be allowed if they are rewritten in independent form to include the limitations of the base claim and any intervening claims. As these claims are being rewritten in independent form to include the limitations of the base claim and any intervening claims, they are in condition for allowance.

Prior Art Rejection

Claims 1 and 4 were rejected under 35 U.S.C. § 102(b) on the grounds of being anticipated by U.S. Pat. No. 5,684,794 to Lopez et al. (hereinafter "Lopez"). Under 35 U.S.C. 103(a), (1) claim 2 is unpatentable over Lopez in view of U.S. Pat. No. 6,275,705 to Drane et al. (hereinafter "Drane"); (2) claims 5-7, 14-15 are unpatentable over Lopez in view of U.S. Pat. No. 6,268,824 to Zhodzishky (hereinafter "Zhodzishky"); and (3) claims 10-12 are unpatentable over Lopez in view of Zhodzishky and further in view of U.S. Pat. No. 4,057,803 to Coleman

(hereinafter "Coleman"). These rejections have been carefully considered, but are most respectfully traversed.

The offset measuring method for receiving signals from a radio base station and measuring a transmitting time offset of the radio base station of the invention, as now recited in claim 1, comprises the steps of: calculating estimated values of the transmitting time offset based on signals received at a plurality of observation points with known positions or known distances from the radio base station (*"the distance between the base station and the offset estimation device"* *"measuring the location of the offset measuring apparatus with the use of the GPS receiver 62"* p. 29, line 21 – p. 30, line 12); and selecting a minimum from the estimated offset values to determine the minimum value as a measured value of the transmitting time offset of the radio base station. The transmitting time offset is a time difference between an official timing for sending out a signal and an actual timing when the signal is actually transmitted out from an antenna of the radio base station(p. 2, lines 15-19).

The invention, as now recited in claim 7, is also directed to an offset measuring apparatus for receiving signals from a radio base station thereby measuring a transmitting time offset of the radio base station based upon the method recited in claim 1.

A major purpose of the present invention is to measure the transmitting time offset of a base station in order to accurately know the timing when a signal leaves the antenna of a base station thereby realizing a more accurate position detection of mobile terminals. The present invention solves the problem relating to canceling the effect of the internal delay (compared to the official timing) of the base station (p.1, line 18 to p. 2, line 20).

Applicants respectfully contend that none of the cited references teaches or suggests a method or apparatus for measuring such a "transmitting time offset": a difference between the official transmission timing and the actual transmission timing.

In contrast, the "relative time offset" in Lopez is the time difference between transmission of a downlink signal from a cellular radio network base station and a reference signal included in an uplink signal received at the base station from a network subscriber (Abstract). By comparing the two timings, Lopez distinguishes between valid and invalid uplink signals, i.e., whether the transmitting terminal of the uplink signal is a subscriber that the base station should keep track of or not (See col. 2, lines 9-44). Other cited references fail to compensate for such a deficiency.

Accordingly, the present invention as now recited in the independent claims 1 and 7 is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

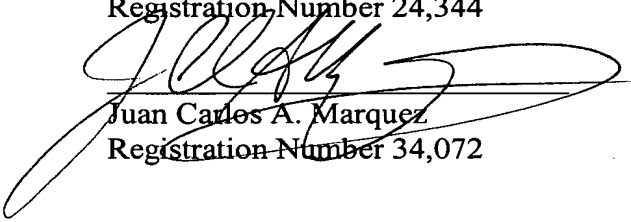
Conclusion

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely, Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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